NUV 2 4 2008

Express Mail No.: EV 958784902 US

IN THE UNITED STATES	APPLICATION NO:	10/081,955
PATENT AND TRADEMARK OFFICE	FILING DATE:	2/20/2002
	FIRST NAMED INVENTOR:	George E. Seidel
INFORMATION DISCLOSURE	ART UNIT:	1634
STATEMENT BY APPLICANT	EXAMINER NAME:	Carla J. Meyers
	DOCKET NO:	XY-Super-Cont2

I. US PATENT DOCUMENTS

EXAMINER	DOCUMENT NO.	PUB'N DATE	PATENTEE OR	Pages, Columns, Lines Where
INITIAL	& KIND CODE (if		APPLICANT NAME	Relevant Passages Or Relevant
	known)			Drawings Appear
	5,316,540	5/31/1994	McMannis et al.	
	6,767,706	7/27/2004	Quake	
	6,097,485	8/1/2000	Lievan	
	2003/0078703	4/24/2003	Potts	
=	2007/0017086	5/1/2007	Evans et al.	
	7,015,310	3/1/2006	Remington et al.	
	3,005,756	10/24/1961	VanDemark, et al.	
	3,791,384	1/12/1974	Richter et al.	
	6,309,815	10/30/2001	Tash et al.	
	6,316,234	11/13/2001	Bova	
	5,658,751	8/19/1997	Yue et al.	
	5,798,276	8/25/1998	Haugland et al.	
	6,130,034	10/10/2000	Aitken	
•	6,368,786	4/8/2002	Saint-Ramon et al.	
	5,990,479	11/23/1999	Weiss et al.	
	5,998,140	12/7/1999	Dervan et al.	
	6,090,947	7/18/2000	Dervan et al.	
	6,143,901	11/7/2000	Dervan	
	6,207,392 B1	3/27/2001	Weiss et al.	
	6,247,323 B1	6/19/2001	Maeda	
	6,322,901 B1	11/27/2001	Bawendi et al.	
1	6,326,144 B1	12/4/2001	Bawendi et al.	
	6,416,190 B1	7/9/2002	Grier et al.	
	6,423,551 B1	7/23/2002	Weiss et al.	
	6,432,638 B2	8/13/2002	Dervan et al.	
	6,576,291 B2	6/10/2003	Bawendi et al.	
	6,849,394 B2	2/1/2005	Rozenboom et al.	
	2003/0113765 A1	6/19/2003	Dempcy et al.	
	3,906,929	9/23/1975	Augspurger	
	34,782	11/8/1994	Dandliker et al.	
	3,738,759	6/12/1973	Dittrich et al.	
	3,761,187	9/25/1973	Dittrich et al.	
	3,788,744	1/29/1974	Friedman et al.	
	3,791,517	2/12/1974	Friedman	
	3,816,249	6/11/1974	Bhattacharya	
	3,944,917	3/16/1976	Hogg et al.	

	4,006,360	2/1/1977	Mueller
	4,056,324	11/1/1977	Gohde
	4,058,732	11/15/1977	Wieder
	4,110,604	8/29/1978	Haynes et al.
	4,148,718	4/10/1979	Fulwyler
	4,175,662	11/27/1979	Zold
	4,189,236	2/19/1980	Hogg et al.
}	4,225,229	9/30/1980	Gohde
	4,263,508	4/21/1981	Leary et al.
	4,348,107	9/7/1982	Leif
	4,367,043	1/4/1983	Sweet et al.
	4,408,877	10/11/1983	Lindmo et al.
	4,492,436	1/8/1985	Bergmann
	4,545,677	10/8/1985	Chupp
	4,585,736	4/29/1986	Dolbeare et al.
	4,609,286	9/2/1986	Sage, Jr.
	4,629,687	12/16/1986	Schindler et al.
	4,659,185	4/21/1987	Aughton
	4,661,913	4/28/1987	Wu et al.
	4,662,742	5/5/1987	Chupp
	4,673,289	6/16/1987	Gaucher
	4,704,891	11/10/1987	Recktenwald et al.
	4,710,635	12/1/1987	Chupp
ļ	4,737,025	4/12/1988	Steen
	4,752,131	6/21/1988	Eisenlauer et al.
	4,765,737	8/23/1988	Harris et al.
	4,770,992	9/13/1988	den Engh et al.
	4,778,593	10/18/1988	Yamashita et al.
	4,780,406	10/25/1988	Dolbeare et al.
	4,786,165	11/22/1988	Yamamoto et al.
	4,867,908	9/19/1989	Recktenwald et al.
	4,871,249	10/3/1989	Watson
		10/24/1989	Takeda et al.
	4,876,458	12/19/1989	Martin et al.
	4,887,721	4/10/1990	Steen
	4,915,501	6/26/1990	Zold
	4,936,465	9/4/1990	Zold
	4,954,715	9/18/1990	Takeda et al.
	4,957,363	2/5/1991	North, Jr.
	4,989,977	8/20/1991	North, Jr.
	5,040,890	8/27/1991	Ludlow et al.
	5,043,591	10/15/1991	Terstappen et al.
	5,057,413	12/10/1991	Kamentsky
ļ	5,072,382	12/31/1991	Gross et al.
	5,076,472	2/11/1992	Gross et al.
	5,087,295	2/18/1992	Ludlow et al.
	5,089,714	5/26/1992	Rigler
	5,116,125	8/11/1992	Lefevre et al.
	5,138,181	8/25/1992	Yamazaki et al.
	5,142,140	8/25/1992	Kashima
	5,142,462	10/27/1992	Hirako et al.
	5,158,889	4/20/1993	
<u></u>	5,204,884	412011333	Leary et al.

.

	5,274,240	12/28/1993	Mathies et al.
	5,275,787	1/4/1994	Yuguchi et al.
	5,317,162	5/31/1994	Pinsky et al.
	5,395,588	3/7/1995	North, Jr. et al.
	5,400,179	3/21/1995	Ito
	5,444,527	8/22/1995	Kosaka
	5,447,841	9/5/1995	Grey et al.
	5,457,526	10/10/1995	Kosaka
	5,464,581	11/7/1995	Van den Engh
	5,469,375	11/21/1995	Kosaka
	5,475,487	12/12/1995	Mariella, Jr. et al.
	5,480,775	1/2/1996	Ito et al.
	5,488,469	1/30/1996	Yamamoto et al.
	5,495,719	3/5/1996	Gray, Jr.
	5,547,849	8/20/1996	Baer et al.
	5,548,395	8/20/1996	Kosaka
	5,548,661	8/20/1996	Price et al.
	5,550,058	8/27/1996	Corio et al.
	5,556,764	9/17/1996	Sizto et al.
	5,579,159	11/26/1996	Ito Ito
	5,584,982	12/17/1996	Dovichi et al.
		2/11/1997	Larue
	5,601,234	3/4/1997	Grouley et al.
	5,608,519	4/15/1997	Davis et al.
-	5,620,842 5,627,037	5/6/1997	Ward et al.
	5,633,503	5/27/1997	Kosaka
		7/1/1997	den Engh et al.
	5,643,796	10/7/1997	1 Uma a a
	5,674,743	10/28/1997	Hoffman
	5,682,038	12/9/1997	Wang et al.
	5,696,157 5,701,012	12/23/1997	Ho
		12/27/1998	Bangham
	5,712,807	2/17/1998	Fukuda et al.
	5,719,666 5,719,667	2/17/1998	Miers
	5,726,009	3/10/1998	Connors et al.
	5,726,751	3/10/1998	Altendorf et al.
		3/24/1998	Lefevre et al.
	5,730,941 5,736,330	4/7/1998	Fulton
	5,736,330	4/7/1998	Fulton
	5,739,902	4/14/1998	Gjelsnes et al.
	5,745,308	4/28/1998	Spangenberg
—— ——	5,747,349	5/10/1998	den Engh et al.
	5,790,692	8/4/1998	Price et al.
	5,831,723	11/3/1998	Kubota et al.
·	5,840,504	11/24/1998	Blecher
	5,844,685	12/1/1998	Gontin
<u> </u>	5,846,737	12/8/1998	Kang
	5,866,344	2/2/1999	Georgiou
	5,872,627	2/16/1999	Miers
	5,874,266	2/23/1999	Paisson
	5,880,474	3/9/1999	Norton et al.
		3/16/1999	Irish et al.
	5,883,378	0, 10, 1000	inion of al.

	5,909,278	6/1/1999	Deka et al.
	5,917,733	6/29/1999	Bangham
	5,962,238	10/5/1999	Sizto et al.
	5,972,710	10/26/1999	Weigl et al.
	5,973,842	10/26/1999	Spangenberg
	5,991,028	11/23/1999	Cabib et al.
	5,998,212	12/7/1999	Corio et al.
	6,003,678	12/21/1999	Van den Engh
	6,042,025	3/28/2000	Crampton et al.
	6,042,249	3/28/2000	Spangenberg
	6,071,689	6/6/2000	Seidel et al.
	6,079,836	6/27/2000	Burr et al.
	6,111,398	8/29/2000	Graham
	6,120,735	9/19/2000	Zborowski et al.
-	6,128,133	10/3/2000	Bergmann
	6,132,961	10/17/2000	Gray et al.
	6,133,995	10/17/2000	Kubota
	6,139,800	10/31/2000	Chandler
ļ	6,143,535	11/7/2000	Paisson
	6,146,837	11/14/2000	van de Winkel
	6,193,647 B1	2/27/2001	Beebe et al.
	6,201,628 B1	3/13/2001	Basiji et al.
	6,208,411 B1	3/27/2001	Vaez-Iravani
	6,211,477 B1	4/3/2001	Cardott et al.
	6,214,560 B1	4/10/2001	Yguerabide et al.
	6,221,654 B1	4/24/2001	Quake et al.
l	6,221,671 B1	4/24/2001	Groner et al.
	6,256,096 B1	7/3/2001	Johnson
<u> </u>	6,256,096 B1	7/3/2001	Johnson et al.
-	6,296,810 B1	10/2/2001	Ulmer
	6,317,511 B1	11/3/2001	Horiuchi
<u> </u>	6,323,632 B1	11/27/2001	Husher et al.
	6,329,158 B1	12/11/2001	Hoffman et al.
	6,332,540 B1	12/25/2001	Paul et al.
	6,372,506 B1	4/16/2002	Norton
	6,384,951 B1	5/7/2002	Basiji et al.
	6,400,453 B1	6/4/2002	Hansen
	6,411,904 B1	5/25/2002	Chandler
	6,423,505 B1	7/23/2002	Davis
	6,452,372 B1	9/17/2002	Husher et al.
	6,454,945 B1	9/24/2002	Weigl et al.
	6,456,055 B2	9/24/2002	Shinabe et al.
	6,465,169 B2	10/15/2002	Walderich et al.
	6,473,176 B2	10/29/2002	Basiji et al.
	6,482,652 B2	11/19/2002	Furlong et al.
	6,495,333 B1	12/17/2002	Willmann et al.
	6,503,698 B1	1/7/2003	Dobrinsky et al.
	6,511,853 B1	1/28/2003	Kopf-Sill et al.
	6,514,722 B2	2/4/2003	Paisson et al.
	6,540,895 B1	4/1/2003	Spence et al.
	6,563,583 B2	5/13/2003	Ortyn et al.
	6,580,504 B1	6/17/2003	Ortyn et al.

	6,587,203 B2	7/1/2003	Colon	
	6,589,792 B1	7/8/2003	Malachowski	
	6,596,143 B1	7/22/2003	Wang et al.	
	6,596,499 B2	7/22/2003	Jalink	
	6,613,525 B2	9/2/2003	Nelson et al.	
	6,618,143 B2	9/9/2003	Roche et al.	
	6,641,708 B1	11/4/2003	Becker et al.	
	6,658,357 B2	12/2/2003	Chandler	
	6,664,550 B2	12/16/2003	Rader et al.	
	6,674,525 B2	1/6/2004	Bardell et al.	
	6,700,130 B2	3/2/2004	Fritz	
	6,703,621 B2	3/9/2004	Wolleschensky	
	6,706,163 B2	3/16/2004	Seul et al.	
	6,707,555 B1	3/16/2004	Kusuzawa et al.	
	6,713,019 B2	3/30/2004	Ozasa et al.	
	6,746,873 B1	6/8/2004	Buchanan et al.	
	6,753,161 B2	6/22/2004	Koller et al.	
	6,780,377 B2	8/24/2004	Hall et al.	
	6,849,423 B2	2/1/2005	Mutz et al.	
	6,861,265 B1	3/1/2005	Van den Engh	
	6,941,005 B2	9/6/2005	Lary et al.	
	6,813,017 B1	11/2/2004	Hoffman et al.	
	2001/0006416 A1	7/5/2001	Johnson	
	2002/0047697 A1	4/25/2002	Husher et al.	
	2002/0058332 A1	5/16/2002	Quake et al.	
	2002/0064809 A1	5/30/2002	Mutz et al.	
	2002/0115055 A1	8/22/2002	Matta	
	2002/0171827 A1	11/21/2002	Van den Engh	
	2002/0182590 A1	12/2/2002	Strange et al.	
	2002/0186874 A1	12/12/2002	Price et al.	
	2002/0198928 A1	12/26/2002	Bukshpan et al.	
	2003/0048433 A1	3/13/2003	Desjonqueres	
	2003/0059764 A1	3/27/2003	Ravkin et al.	
	2003/0059945 A1	3/27/2003	Dzekunov et ai.	
	2003/0096405 A1	5/22/2003	Takayama et al.	
	2003/0119050 A1	6/26/2003	Shai	
	2003/0119206 A1	6/26/2003	Shai	
	2003/0165812 A1	9/4/2003	Takayama et al.	
<u> </u>	2003/0175917 A1	9/18/2003	Cumming	
	2003/0175980 A1	9/18/2003	Hayenga et al.	
	2003/0190681 A1	10/9/2003	Shai	
	2004/0034879 A1	2/19/2004	Rothstein et al.	
	2004/0034879 A1	2/19/2004	Rothstein et al.	
ļ	2004/0061070 A1	4/1/2004	Hansen	
	2004/0061070 A1	4/1/2004	Hansen	
	2004/0061853 A1	4/1/2004	Blasenheim	
	20060203226 A1	9/14/2006	Roche et al.	
	20040072278 A1	4/15/2004	Chou et al.	
	20070248976 A1	10/25/2007	Harding	

II. FOREIGN PATENT DOCUMENTS

EXAMINER	Foreign Patent Document Country			TRANS	LATION
INITIAL	Code, Number, Kind Code (if	dd-yyyy	APPLICANT NAME	Yes	No
	known)				
	WO 0175176	10/11/2001			
	WO 9957955	11/18/1999			
	WO 04001401	12/31/2003			
	WO 01/68110	9/20/2001			T T
	WO 02/19594	3/7/2002	Arizona Board of Regents, Acting on Behalf of Arizona State University		
	GB 2145112	2/3/1985	Milk Marketing Board		
	WO 00/54026	9/14/2000	Christensen, et al.		1
	CA 1029833	4/18/1978	Goehde, et al.	<u> </u>	1
	CA 1 250 808		Dresser, D. et al.	<u>† </u>	
	CA 2,113,957 A1		Wildeman, A. et al.	t	
				<u>L</u>	
	EP 0 822 401 A2	4/2/1998	Behringer, B. et al.		
	EP 0 025 296 B1	5/15/1985	Ortho Diagnostic Systems INC.		
	EP 1 118 268 A1	7/25/2001	Artemis Pharmaceuticals		
	EP 0 026 770 B1	3/16/1983	Ernst, L.		
	EP 0 029 662 B1	2/29/1984	Ortho Diagnostic Systems INC.		
	EP 0 046 345 A2	2/24/1982	Ortho Diagnostic Systems INC.		
	EP 0 068 404 B1	1/5/1983	Becton, Dickinson and Co.		
	EP 0 158 147 A2	10/16/1985	Becton, Dickinson and Co.		
	EP 0 229 814 B1	7/29/1987	Steen, H. et al.		
	EP 0 246 604 A2	11/25/1987	Becton, Dickinson and Co.		
	EP 0 279 000 B1	7/21/1993	Ratcom, Inc		
	EP 0 288 029 B1	1/12/1994	Hitachi, LTD.	1	
	EP 0 289 200 B2	8/24/1994	Preikschat, F. et al.		
	EP 0 289 677 A2	11/9/1988	Preikschat, F. et al.		
	EP 0 316 171 B1	9/30/1992	Government Of The United Kingdom		
	EP 0 316 172 B1	7/29/1992	Government Of The United Kingdom		
	EP 0 316 173 A1	5/17/1989	Government Of The United Kingdom		
	EP 0 317 809 A2	5/31/1989	Becton, Dickinson and Co.		0
	EP 0 360 487 B1	7/0/4007	Hitachi, LTD.		

	EP 0 361 503 B1	11/30/1994	TOA Medical Electronics Co.	
	<u>-</u>	, ,,,,,,,,	LTD.	
	EP 0 361 504 B1	7/27/1994	TOA Medical Electronics Co. LTD.	
	EP 0 381 694 B1	6/1/1994	United States Department of Energy	
	EP 0 409 293 A2	1/23/1991	Becton, Dickinson and Co.	
<u> </u>	EP 0 412 431 B1	10/29/1997	Becton, Dickinson and Co.	
	EP 0 430 402 B1	1/27/1999	The Regents of the University Of California	
	EP 0 463 562 A1	1/2/1992	Flow Science, INC.	
	EP 0 471 758 B1	9/11/1996	United States of America	
	EP 0474 187 A2	3/11/1992	Hitachi, LTD.	
	EP 0 526 131 B1		TOA Medical Electronics Co. LTD.	
	EP 0 529 666 B1	4/12/2000	Omron Corporation	
	EP 0 534 033 B1	11/28/2001	Fahim, M.	
	EP 0 545 284 B1	2/5/1997	Canon Kabushiki Kaisha Tokyo	
	EP 0 553 951 A1	8/4/1993	TOA Medical Electronics Co. LTD.	
	EP 0 555 212 B1	10/12/1994	Biophos Medical	
	EP 0 556 748 B1		Canon Kabushiki Kaisha Tokyo	
	EP 0 662 124 B1	6/12/2002	Systemix, INC.	
	EP 0 696 731 A2	2/14/1996	TOA Medical Electronics Co. LTD.	
	EP 0 705 978 A2	4/10/1996	Bayer Corporation	
	EP 0 711 991 A1		TOA Medical Electronics Co. LTD.	
	EP 0 736 765 A1	10/9/1996	Becton, Dickinson and Co.	
	EP 0 748 316 B1	5/8/2002	Sunkyong Industries Co., LTD.	
	EP 0 752 133 B1	6/28/2000	Coulter Corporation	
	EP 0 822 404 A3	2/4/1998	Bayer Corporation	
	EP 0 925 494 B1	12/19/2001	Scandinavian Micro Biodevices	
	EP 0 994 342 A3		Sysmex Corporation	
	EP 1 018 644 A2		Bayer Corporation	
	EP 1 100 400 B1	5/19/2004	Kisfeld, A.	

EP 1 147 774 A1	1	T== = ==	10000000	In a second	
EP 1 245 944 A3 10/2/2002 Sysmex Corporation EP 1 249 502 A2 10/16/2002 Hilacoi Software Engineering Co., Ltd. EP 1 257 168 B1 2/2/2005 XY, Inc. 3/21/2002 California Institute Of Technology EP 1 380 304 A2 1/14/2004 Appilled Research Systems ARS GB 2 144 542 A 3/6/1985 Neal, L. et al. GB 2 121 976 A 1/4/1984 International Remote Imaging Systems Inc. GB 2 122 369 A 1/11/1984 International Remote Imaging Systems Inc. GB 2 125 181 A 2/2/9/1984 Coulter Electronics Inc. GB 2 136 561 A 9/19/1984 Coulter Corporation GB 2 153 521 A B/2/11/985 Coulter Corporation GB 2 153 521 A GB 2 243 681 A 1//6/1991 Galal Laboratories Ltd. GB 2 360 360 A 9/19/2001 University of Bristol U.K. WO 01/75161 A2 10/11 01 lows State University Research Foundation WO 99/44035 9/2/1999 Coulter International Corp. WO 02/05/7775 A1 WO 99/12/2004 University of Workington U.S. WO 2004/006916 A1 1/22/2004 Appilled Research Systems ARS WO 2004/046712 A2 6/3/2004 University of Virginia Patent Foundation U.S. WO 93/10803 6/10/1993 British Technology Group LTD., G.B. WO 93/10803 First Feents of the University Of Michigan U.S.		EP 1 14/ //4 A1	10/24/2001		
EP 1 249 502 A2 10/16/2002 Hitacci Software Engineering Co., Ltd. EP 1 257 168 B1 2/2/2005 XY, Inc. WO 02/23163 A1 3/21/2002 California Institute Of Technology EP 1 380 304 A2 1/14/2004 Appilled Research Systems ARS GB 2 144 542 A 3/6/1985 Neal, L. et al. International Remote Imaging Systems Inc. GB 2 122 369 A 1/11/1984 International Remote Imaging Systems Inc. GB 2 125 181 A 2/29/1984 Coulter Electronics Inc. GB 2 136 561 A 9/19/1984 Coulter Corporation GB 2 137 352 A 10/3/1984 Coulter Corporation GB 2 133 521 A B/21/1985 United States Department of Energy GB 2 243 681 A 11/6/1991 Gaial Laboratories Ltd. GB 2 360 360 A 9/19/2001 University of Bristol U.K. WO 01/75161 A2 10/11 01 WO 99/44035 9/2/1998 Coulter International Corp. WO 02/057775 A1 WO 99/44035 9/2/1998 Coulter International Corp. WO 02/057775 A1 1/22/2002 Cytomation, Inc. WO 99/44035 9/2/1998 Coulter International Corp. WO 2004/006916 A1 1/22/2004 University of Washington U.S. WO 2004/046712 A2 6/3/2004 University of Virginia Patent Foundation U.S. WO 93/10803 6/10/1933 British Technology Group LTD., G.B. WO 93/10803 6/10/1933 British Technology Group LTD., G.B.	İ			Landbouwkundig Onderzoek	
EP 1 249 502 A2		ED 1 245 944 A3	10/2/2002	Sysmax Composition	
Co., Ltd.		EF 1 245 944 A3	10/2/2002	Sysmex Corporation	
Co., Ltd.	-	EP 1 249 502 A2	10/16/2002	Hitacci Software Engineering	
EP 1 257 168 B1		1249 302 72	10/10/2002		
WO 02/23163 A1 3/21/2002 California Institute Of Technology Te				Oo., Etd.	
WO 02/23163 A1 3/21/2002 California Institute Of Technology Te		ED 1 257 169 D1	2/2/2005	YY Inc	
Technology					
EP 1 380 304 A2		WO 02/23163 A1	3/21/2002		
ARS GB 2 144 542 A 3/6/1985 Neal, L. et al.					
GB 2 144 542 A 3/6/1985 Neal, L. et al.		EP 1 380 304 A2	1/14/2004		
GB 2 121 976 A					
Imaging Systems Inc.		GB 2 144 542 A	3/6/1985	Neal, L. et al.	
Imaging Systems Inc.		GB 2 121 976 A	1/4/1984	International Remote	
GB 2 122 369 A 1/11/1984 International Remote Imaging Systems Inc. GB 2 125 181 A 2/29/1984 Coulter Electronics Inc. GB 2 136 561 A 9/19/1984 Coulter Corporation GB 2 137 352 A 10/3/1984 Coulter Corporation GB 2 153 521 A 8/21/1985 United States Department of Energy GB 2 243 681 A 11/6/1991 Galal Laboratories Ltd. GB 2 360 360 A 9/19/2001 University of Bristol U.K. WO 01/75161 A2 10/11 01 Iowa State University Research Foundation WO 99/44035 9/21/1999 Coulter International Corp. WO 02/057775 A1 7/25/2002 Cytomation, Inc. WO 96/12172 4/25/1996 University of Washington U.S. WO 2004/006916 A1 1/22/2004 Applied Research Systems ARS WO 2004/046712 A2 6/3/2004 University of Virginia Patent Foundation U.S. WO 93/10803 6/10/1993 British Technology Group LTD., G.B. WO 03/ 072765 A1 9/4/2003 The Regents of the University of Michigan U.S.)	
Imaging Systems Inc.					
Imaging Systems Inc.		GB 2 122 369 A	1/11/1984	International Remote	
GB 2 125 181 A 2/29/1984 Coulter Electronics Inc. GB 2 136 561 A 9/19/1984 Coulter Corporation GB 2 137 352 A 10/3/1984 Coulter Corporation GB 2 153 521 A 8/21/1985 United States Department of Energy GB 2 243 681 A 11/6/1991 Gaial Laboratories Ltd. GB 2 360 360 A 9/19/2001 University of Bristol U.K. WO 01/75161 A2 10/11 01 lowa State University Research Foundation WO 99/44035 9/2/1999 Coulter International Corp. WO 02/057775 A1 7/25/2002 Cytomation, Inc. WO 96/12172 4/25/1996 University of Washington U.S. WO 2004/006916 A1 1/22/2004 Appliled Research Systems ARS WO 2004/046712 A2 6/3/2004 University of Virginia Patent Foundation U.S. WO 93/10803 6/10/1993 British Technology Group LTD., G.B. WO 03/ 072765 A1 9/4/2003 The Regents of the University Of Michigan U.S.		100 Z 122 000 X	1,71,71304	· ·	
GB 2 136 561 A 9/19/1984 Coulter Corporation GB 2 137 352 A 10/3/1984 Coulter Corporation GB 2 153 521 A 8/21/1985 United States Department of Energy GB 2 243 681 A 11/6/1991 Gaial Laboratories Ltd. GB 2 360 360 A 9/19/2001 University of Bristol U.K. WO 01/75161 A2 10/11 01 lows State University Research Foundation WO 99/44035 9/2/1999 Coulter International Corp. WO 02/057775 A1 7/25/2002 Cytomation, Inc. WO 96/12172 4/25/1996 U.S. WO 2004/006916 A1 1/22/2004 Appliled Research Systems ARS WO 2004/046712 A2 6/3/2004 University of Virginia Patent Foundation U.S. WO 93/10803 6/10/1993 British Technology Group LTD., G.B. WO 03/ 072765 A1 9/4/2003 The Regents of the University Of Michigan U.S.		i		maging dystems inc.	
GB 2 136 561 A 9/19/1984 Coulter Corporation GB 2 137 352 A 10/3/1984 Coulter Corporation GB 2 153 521 A 8/21/1985 United States Department of Energy GB 2 243 681 A 11/6/1991 Gaial Laboratories Ltd. GB 2 360 360 A 9/19/2001 University of Bristol U.K. WO 01/75161 A2 10/11 01 lows State University Research Foundation WO 99/44035 9/2/1999 Coulter International Corp. WO 02/057775 A1 7/25/2002 Cytomation, Inc. WO 96/12172 4/25/1996 University of Washington U.S. WO 2004/06916 A1 1/22/2004 Appilled Research Systems ARS WO 2004/046712 A2 6/3/2004 University of Virginia Patent Foundation U.S. WO 93/10803 6/10/1993 British Technology Group LTD., G.B. WO 03/ 072765 A1 9/4/2003 The Regents of the University Of Michigan U.S.		CP 2 125 104 A	2/20/4004	Coultor Floatrasias Inc	
GB 2 137 352 A 10/3/1984 Coulter Corporation GB 2 153 521 A 8/21/1985 United States Department of Energy GB 2 243 681 A 11/6/1991 Gaial Laboratories Ltd. GB 2 360 360 A 9/19/2001 University of Bristol U.K. WO 01/75161 A2 10/11 01 lowa State University Research Foundation WO 99/44035 9/2/1999 Coulter International Corp. WO 02/057775 A1 7/25/2002 Cytomation, Inc. WO 96/12172 4/25/1996 University of Washington U.S. WO 2004/006916 A1 1/22/2004 Appliled Research Systems ARS WO 2004/046712 A2 6/3/2004 University of Virginia Patent Foundation U.S. WO 93/10803 6/10/1993 British Technology Group LTD., G.B. WO 03/ 072765 A1 9/4/2003 The Regents of the University Of Michigan U.S.		GB 2 125 181 A	2/29/1984	Coulter Electronics Inc.	
GB 2 137 352 A 10/3/1984 Coulter Corporation GB 2 153 521 A 8/21/1985 United States Department of Energy GB 2 243 681 A 11/6/1991 Gaial Laboratories Ltd. GB 2 360 360 A 9/19/2001 University of Bristol U.K. WO 01/75161 A2 10/11 01 lowa State University Research Foundation WO 99/44035 9/2/1999 Coulter International Corp. WO 02/057775 A1 7/25/2002 Cytomation, Inc. WO 96/12172 4/25/1996 University of Washington U.S. WO 2004/006916 A1 1/22/2004 Appliled Research Systems ARS WO 2004/046712 A2 6/3/2004 University of Virginia Patent Foundation U.S. WO 93/10803 6/10/1993 British Technology Group LTD., G.B. WO 03/ 072765 A1 9/4/2003 The Regents of the University Of Michigan U.S.		00000000			
GB 2 153 521 A B/21/1985 United States Department of Energy GB 2 243 681 A 11/6/1991 Gaial Laboratories Ltd. GB 2 360 360 A 9/19/2001 University of Bristol U.K. WO 01/75161 A2 10/11 01 lowa State University Research Foundation WO 99/44035 9/2/1999 Coulter International Corp. WO 02/057775 A1 7/25/2002 Cytomation, Inc. WO 96/12172 4/25/1996 University of Washington U.S. WO 2004/006916 A1 1/22/2004 Appliled Research Systems ARS WO 2004/046712 A2 6/3/2004 University of Virginia Patent Foundation U.S. WO 93/10803 6/10/1993 British Technology Group LTD., G.B. WO 03/ 072765 A1 9/4/2003 The Regents of the University Of Michigan U.S.		GB 2 136 561 A	9/19/1984	Coulter Corporation	1
GB 2 153 521 A B/21/1985 United States Department of Energy GB 2 243 681 A 11/6/1991 Gaial Laboratories Ltd. GB 2 360 360 A 9/19/2001 University of Bristol U.K. WO 01/75161 A2 10/11 01 lowa State University Research Foundation WO 99/44035 9/2/1999 Coulter International Corp. WO 02/057775 A1 7/25/2002 Cytomation, Inc. WO 96/12172 4/25/1996 University of Washington U.S. WO 2004/006916 A1 1/22/2004 Appliled Research Systems ARS WO 2004/046712 A2 6/3/2004 University of Virginia Patent Foundation U.S. WO 93/10803 6/10/1993 British Technology Group LTD., G.B. WO 03/ 072765 A1 9/4/2003 The Regents of the University Of Michigan U.S.					
Energy		GB 2 137 352 A	10/3/1984	Coulter Corporation	1
Energy					_
GB 2 243 681 A 11/6/1991 Gaial Laboratories Ltd. GB 2 360 360 A 9/19/2001 University of Bristol U.K. WO 01/75161 A2 10/11 01 lowa State University Research Foundation WO 99/44035 9/2/1999 Coulter International Corp. WO 02/057775 A1 7/25/2002 Cytomation, Inc. WO 96/12172 4/25/1996 University of Washington U.S. WO 2004/006916 A1 1/22/2004 Appliled Research Systems ARS WO 2004/046712 A2 6/3/2004 University of Virginia Patent Foundation U.S. WO 93/10803 6/10/1993 British Technology Group LTD., G.B. WO 03/ 072765 A1 9/4/2003 The Regents of the University Of Michigan U.S.	-	GB 2 153 521 A	8/21/1985	United States Department of	
GB 2 360 360 A 9/19/2001 University of Bristol U.K. WO 01/75161 A2 10/11 01 lowa State University Research Foundation WO 99/44035 9/2/1999 Coulter International Corp. WO 02/057775 A1 7/25/2002 Cytomation, Inc. WO 96/12172 4/25/1996 University of Washington U.S. WO 2004/006916 A1 1/22/2004 Appliled Research Systems ARS WO 2004/046712 A2 6/3/2004 University of Virginia Patent Foundation U.S. WO 93/10803 6/10/1993 British Technology Group LTD., G.B. WO 03/ 072765 A1 9/4/2003 The Regents of the University Of Michigan U.S.				Energy	
GB 2 360 360 A 9/19/2001 University of Bristol U.K. WO 01/75161 A2 10/11 01 lowa State University Research Foundation WO 99/44035 9/2/1999 Coulter International Corp. WO 02/057775 A1 7/25/2002 Cytomation, Inc. WO 96/12172 4/25/1996 University of Washington U.S. WO 2004/006916 A1 1/22/2004 Appliled Research Systems ARS WO 2004/046712 A2 6/3/2004 University of Virginia Patent Foundation U.S. WO 93/10803 6/10/1993 British Technology Group LTD., G.B. WO 03/ 072765 A1 9/4/2003 The Regents of the University Of Michigan U.S.					
GB 2 360 360 A 9/19/2001 University of Bristol U.K. WO 01/75161 A2 10/11 01 lowa State University Research Foundation WO 99/44035 9/2/1999 Coulter International Corp. WO 02/057775 A1 7/25/2002 Cytomation, Inc. WO 96/12172 4/25/1996 University of Washington U.S. WO 2004/006916 A1 1/22/2004 Appliled Research Systems ARS WO 2004/046712 A2 6/3/2004 University of Virginia Patent Foundation U.S. WO 93/10803 6/10/1993 British Technology Group LTD., G.B. WO 03/ 072765 A1 9/4/2003 The Regents of the University Of Michigan U.S.		GB 2 243 681 A	11/6/1991	Gaial Laboratories Ltd.	····
WO 01/75161 A2 10/11 01 lowa State University Research Foundation					i
WO 01/75161 A2 10/11 01 lowa State University Research Foundation		GB 2 360 360 A	9/19/2001	University of Bristol LLK	
Research Foundation			1	Shirt drawy or Briefor Girt.	
Research Foundation		WO 01/75161 A2	10/11 01	Iowa State University	
WO 99/44035 9/2/1999 Coulter International Corp. WO 02/057775 A1 7/25/2002 Cytomation, Inc. WO 96/12172 4/25/1996 University of Washington U.S. WO 2004/006916 A1 1/22/2004 Appliled Research Systems ARS WO 2004/046712 A2 6/3/2004 University of Virginia Patent Foundation U.S. WO 93/10803 6/10/1993 British Technology Group LTD., G.B. WO 03/ 072765 A1 9/4/2003 The Regents of the University Of Michigan U.S.		110011111111111111111111111111111111111	1.07.11.01	Research Foundation	
WO 02/057775 A1				Trescarent roundation	
WO 02/057775 A1					
WO 02/057775 A1		1410 0011 1005	0/0/1000		
WO 96/12172		WV 99/44035	9/2/1999	Coulter International Corp.	
WO 96/12172	L	1440 -040			
U.S.					
U.S. WO 2004/006916 A1 1/22/2004 Applied Research Systems ARS WO 2004/046712 A2 6/3/2004 University of Virginia Patent Foundation U.S. WO 93/10803 6/10/1993 British Technology Group LTD., G.B. WO 03/ 072765 A1 9/4/2003 The Regents of the University Of Michigan U.S.		WO 96/12172	4/25/1996	University of Washington	
ARS WO 2004/046712 A2 6/3/2004 University of Virginia Patent Foundation U.S. WO 93/10803 6/10/1993 British Technology Group LTD., G.B. WO 03/ 072765 A1 9/4/2003 The Regents of the University Of Michigan U.S.					
ARS WO 2004/046712 A2 6/3/2004 University of Virginia Patent Foundation U.S. WO 93/10803 6/10/1993 British Technology Group LTD., G.B. WO 03/ 072765 A1 9/4/2003 The Regents of the University Of Michigan U.S.		WO 2004/006916 A1	1/22/2004	Appliled Research Systems	
WO 2004/046712 A2 6/3/2004 University of Virginia Patent Foundation U.S. WO 93/10803 6/10/1993 British Technology Group LTD., G.B. WO 03/ 072765 A1 9/4/2003 The Regents of the University Of Michigan U.S.					
WO 93/10803 6/10/1993 British Technology Group LTD., G.B. WO 03/ 072765 A1 9/4/2003 The Regents of the University Of Michigan U.S.		WO 2004/046712 A2	6/3/2004		
WO 93/10803 6/10/1993 British Technology Group LTD., G.B. WO 03/ 072765 A1 9/4/2003 The Regents of the University Of Michigan U.S.			3/3/2004		
WO 03/ 072765 A1 9/4/2003 The Regents of the University Of Michigan U.S.					
WO 03/ 072765 A1 9/4/2003 The Regents of the University Of Michigan U.S.		WO 93/10803	6/40/4000	Pritich Tochacles Cours	
WO 03/ 072765 A1 9/4/2003 The Regents of the University Of Michigan U.S.		VVO 95/10005	6/10/1993		
University Of Michigan U.S.				LID., G.B.	
University Of Michigan U.S.		140.004.070707			
		WO 03/ 0/2765 A1	9/4/2003		
N/O 03/050990 A4				University Of Michigan U.S.	
1MO 02/06/090 A4					
		WO 02/060880 A1	8/8/2002	The Universite De Geneve	
WO 02/092247 A1 11/21/2002 Cytomation, Inc.		WO 02/092247 A1	11/21/2002	Cytomation, Inc.	Î

WO 2006/015056 A2	2/9/2006	Dako-Cytomation, Denmarks	
 WO 03/008937 A2	1/30/2003	The Regents of the	
		University Of Michigan U.S.	
WO 02/052244 A2	7/4/2002	Amer-Sham Biosciences AB	
WO 00/12204	3/9/2000	University Of Washington U.S.	
WO 00/36396	6/22/2000	Union Biometrica, INC., U.S.	
WO 00/49387	8/24/2000	IDEXX Laboratories, INC., U.S.	
WO 00/56444	9/28/2000	Torsana Biosensor	
WO 00/70080	11/23/2000	Caliper Technologies Corp. U.S.	
WO 01/02836 A1	1/11/2001	Becton, Dickinson and Company U.S.	
WO 01/28700 A1	4/26/2001	Cytomation, Inc. U.S.	
 WO 01/42757 A2	6/14/2001	Oregon Health Sciences University U.S.	
WO 01/61313 A2	8/23/2001	(MWI, Inc.) Danam Electronics	
WO 01/68226 A2	9/20/2001	University of Bristol U.K.	
WO 01/71348 A1	9/27/2001	The Board Of Trustees of the Leland Stanford Junior University U.S.	
 WO 02/01189 A1	1/3/2002	Gnothis Holding S.A.	
WO 02/04666 A2	1/17/2002	Cambridge University Technical Services Limited	
 WO 02/054044 A2	7/11/2002	Picoliter Inc. U.S.	
WO 02/077637 A1		Infigen, Inc. U.S.	
 WO 02/092161 A1	11/21/2002	Bio-Phan, LLC. U.S.	
WO 02/20850 A2	3/14/2002	Iowa State University Research Foundation U.S.	
WO 02/21102 A2	3/14/2002	Guava Technologies, Inc. U.S.	
WO 02/25269 A2	3/28/2002	The University of Manchester	
WO 02/26114 A2	4/4/2002	Bitensky, M. et al.	

•

-

	WO 02/29106 A2	4/11/2002	California Institute Of Technology U.S.	
	WO 02/44319 A2	6/6/2002	Picoliter Inc. U.S.	
	WO 03/008102 A1	1/30/2003	The Regents of the University Of Michigan U.S.	
	WO 03/012403 A1	2/13/2003	Bio-Cytex	
	WO 03/016875 A2		Union Biometrica, Inc. U.S.	
	WO 03/056330 A2	7/10/2003	Institut Fur Physikalische Hochtechnologie E.V.	
<u> </u>	WO 03/056335 A2	7/10/2003	Institut Fur Physikalische Hochtechnologie E.V.	
	WO 03/078065 A1	9/25/2003	Micronics, INC. U.S.	
	WO 03/078972 A1	9/25/2003	Micronics, INC. U.S.	
	WO 89/04471 A1	5/18/1989	Government Of The United Kingdom	
	WO 84/01265 A1	4/12/1984	Genetic Engineering, Inc. U.S.	
	W0 85/04014 A1	9/12/1985	Research Corporation, U.S.	
	WO 89/04470 A1	5/18/1989	Government Of The United Kingdom	
	WO 89/04472 A1	5/18/1998	Government Of The United Kingdom	
	WO 92/08120 A1	5/14/1992	Macquarie University	
	WO 92/17288 A1	10/15/1992	The University of Rochester, U.S.	
	WO 94/22001 A1	9/29/1994	Steen, H.	
	WO 96/04542 A1	2/15/1996	Abbott Laboratories, U.S.	
	WO 96/12173 A1	4/25/1996	University Of Washington U.S.	
	WO 96/33806 A1	10/31/1996	Systemix, U.S.	
	WO 97/29354 A1	8/14/1997	Bayer Aktiengesellschaft	
	WO 97/30338 A1	8/21/1997	Inphocyte, Inc., U.S.	
	WO 97/35189 A1	9/25/1997	University Of Washington U.S.	
	WO 97/43620 A1	11/20/1997	International Remote Imaging Systems Inc.	

•

WO 98/57152 A1		Guava Technologies, Inc. U.S.	
WO 99/47906 A1	9/23/1999	Partec Partikelzahlgerate	
WO 99/60397 A1		University Of Washington U.S.	
WO 99/61888 A2	12/2/1999	California Institute Of Technology U.S.	

.

III. NON-PATENT LITERATURE DOCUMENTS

EXAMINER INITIAL	Document
	Bahr, G.F.et al., Considerations of volume, mass, DNA, and arrangement of mitochondria in the midpiece of bull spermatozoa, Experimental Cell Research 60 (1970) 338-340
	Baumber, J., et al., "The Effect of Reactive Oxygen Species on Equine Sperm Motility, Viability, Acrosomal Integrity, Mitochondrial Membrane Potential, and Membrane Lipid Peroxidation", 2000, Journal of Andrology, Vol.21 (6),pp.895-902
	BD LSR II Flow Cytometer, BD Biosciences Clontech Discovery labware Immunocytometry systems Pharmingen 1/28/04
	Bermudez, D.et al., The immediate effect of IR, laser radiation on rat, germ, cells, was studied by cytophotometric quantification, Scisearch 2001
	Sequent Biotechnologies Inc., Welcome to the Sequent Biotechnologies Inc. website., http://www.sequentbiotech.com/ 12/6/03
	Sabuer K. et al. "Effects of Angiotensin II on the Acrosome Reaction in Equine Spermatozoa" Journal of Reproduction and Fertility vol. 120, 2002 P. 135-142
	Brooks, D.E., Manipulation of Mammalian Gametes in Vitro, Biennial Report, Waite Agricultural Research Institute 1986 -1989
	Bruemmer, J.E. et al., "Effect of Pyruvate on the Function of Stallion Spermatozoa Stored for up to 48 Hours", Journal of Animal Science 2002, vol. 80*1, pp.12-18
	Catt, S.L. et al., Hoechst staining and exposure to UV laser during flow cytometric sorting does not affect the frequency of detected endogenous DNA nicks in abnormal and normal human spermatozoa, Molecular Human Reproduction vol.3 no.9 pp. 821-825,(1997)
	Chaudhry, P., et al., Casein Kinase II activity and polyamine-stimulated protein phosphorylation of cytosolic and plasma membrane protiens in bovine sperm, Archives of Biochemistry and Biophyeics Vol.271, No.1 pp.98-106, 5/15/89
	Chen, Y. et al., Effects of sucrose, trehalose, hypotaurine, taurine, and blood serum on survival of frozen bull sperm, Cryobiology 30,423-431 (1993)
	Chapter 16 Semen processing, storage, thawing, and handling, http://nongae.gsnu.ac.kr/~cspark/teaching/chap16.html 9/23/02
	Conover, J. et al., Pre-loading of mouse oocytes with DNA-specific fluorochrome (Hoechs 33342) permits rapid detection of sperm-oocyte fusion, Journals of Reproductive & Fertili Ltd. 82, 681-690 (1988)
	Cressman, B.E. MD, et al., Effect of sperm dose on pregnancy rate from intrauterine insemination: a retrospective analysis, Texas Medicine, 92:74-79 (1996)
	Crissman, H.A. et al., Use of DIO-C5-3 to improve hoechst 33342 uptake, resolution of DNA content, and survival of CHO cells, Experimental cell research 174: 338-396 (1988)
	Graves, C.N., et al., "Metabolism of Pyruvate by Epididymal-Like Bovine Spermatozoa", 1964 Journal of Dairy Science Vol.47 (12), pp.1407-1411
	Certified Semen Services, CSS Minimum requirements for disease control of semen produced for AI, http://www.naab-css.org/about_css/disease_control-2002.html 9/22/03
	Culling, "Handbook of Histopathological and Histochemical Techniques, "3rd Ed., Butterworths, pp.192
	De Grooth, B. et al., Simple delay monitor for droplet sorters, Cytometry 12:469-472 (1991)
	Lodge, J.R., et al., "Carbon Dioxide in Anaerobic Spermatozoan Metabolism" 1968, Journal of Dairy Science, Vol. 51(1), pp. 96-103

	Delgado, N. et al., Correlation between sperm membrane destabilization by heparin and
	aniline blue staining as membrane integrity index, Archives of Andrology40:147-152
	(1998)
	Denniston, D.J. et al., "Effect of Antioxidants on the Motility and Viability of Cooled Stallion
	Spermatozoa", Journal Reproduction Supplement 56, 2001, pp. 121-126
	De Pauw M.C. et al. Sperm Binding to Epithelial Oviduct Explants in Bulls with Different
	Nonreturn Rates Investigated with a new In-Vitro Model Biology of Reproduction, 2002,
	vol. 67 P. 1073-1079
	Donoghue, A. et al., Effects of water- and lipid-soluble antioxidants on turkey sperm
	viability, membrane integrity, and motility during liquid storage, Poultry Science 76:1440-
	1445 (1997)
	Durack, Gary; "Cell - Sorting Technology", Emerging Tools for Single-cell Analysis,
	Chapter 1 pgs.1-359.
	Zucker, R. et al., Utility of light scatter in the Morphological analysis of sperm, Cytometry
	13:39-47 (1992)
	Ericsson, S. et al., Interrelationships among fluorometric analyses of spermatozoal
	function, classical semen quality parameters and the fertility of frozen-thawed bovine
	spermatozoal, Theriogenology 39:1009-1024 (1993)
	Ericsson, et al. "Flow Cytometric Evaluation of Cryopreserved Bovine Spermatozoa
	Processed Using a New Antiobiotic Combination", Theriogenology, 1990, vol.33(6), pp.
	1211-1220
	Cho, et al. A microfluidic device for separating motile sperm from nomotile sprem via inter-
	streamline crossings,
	Ericsson, R. et al., Functional differences between sperm bearing the X- or Y-
	chromosome,
	Esteves, S. et al., Improvement in motion characteristics and acrosome status in
	cryopreserved human spermatozoa by swim-up processing before freezing, Human
	Reproduction vol.15 no.10 pp.2173-2179 (2000)
	Evenson, D.et al., Physiology and Management, Rapid determination on sperm cell
	concentration in bovine semen by flow cytometry, J Dairy Sci. 76: 86 - 94 (1993)
	Farrell et al., "Quantification of Bull Sperm Characteristics measured by Computer-
	Assisted Sperm Analysis (CASA) and the Relationship of Fertility", Theriogenology, 1998,
	vol.49 (4), pp. 871-879
	Fitzgerald, D., Cell sorting: An enriching Experience, The Scientist 7/23/01
	Foote,R., The history of artificial insemination: Selected notes and notables, American
	Society of Animal Science (2002)
	Foote, R., Functional differences between sperm bearing the X- or Y- chromosome
	Garner, D., Past, Present and future perspectives on sexing sperm, CSAS Symposium
	SCSA: 67-78.
	Johnson, L. et al., Sex preselection in mammals by DNA: A method for flow separation of
	X and Y Spermatozoa in humans,
	Johnson, L. et al., Recent advances in sex preselection of cattle: Flow cytometric sorting
	of X-&Y-chromosome bearing sperm based on DNA to produce progeny, Theriogenology
	41:51-56 (1994)
	Ashwood-Smith, M., Debate Human sperm sex selection, Human Reproduction vol.9 no.5
	pp.757-759 (1994)
· · · · · · · · · · · · · · · · · · ·	Pinkel, D.et al., Flow cytometry of mammalian sperm progress in DNA and morphology
	measurement, The Journal of Histochemical and CytochemistryVol.27 No.1 pp. 353-358
	(1979)
	Fugger, E. et al., Birth of normal daughters after MicroSort sperm separation and
	intrauterine insemination, in-vitro fertilization, or intracytoplasmic sperm injection,
	http://www.microsort.net/HumRepro.htm 3/19/03
	programme occitation term topicanian of 10/00

1	Johnson Let al. Flouresting of Versel VC
	Johnson, L. et al., Flow sorting of X and Y Chromosome-bearing Mammalian sperm:
	Activation and pronuclear development of sorted bull, boar, and ram sperm microinjected
	into hamster oocytes, Gamete Research 21:335-343 (1988)
	Salisbury, G.W., et al., "Reversal by Metabolic Regulators of CO2-induced Inhibition of
	Mammalian Spermatozoa, 1959, Proc Soc Exp Biology Med, Vol. 101 (1) pp.187-189
	Centola, G.et al., Cryopreservation of human semen. Comparison of cryopreservatives,
	sources of variability, and prediction of post-thaw survival. PMID: 1601749 May-Jun 1992
	Bencic, D.C., et al., "Carbon Dioxide Reversibly Inhibits Sperm Motility and Fertilizing
	Ability in Steelhead (Oncorhynchus mykiss)" 2000, Fish Physiology and Biochemistry, vol. 23(4), pp 275-281
	Boatman, D.E. et al., "Bicarbonate Carbon Dioxide Regulation of Sperm Capacitation
	Hyperactivated Motility and Acrosome Reactions", 1991, Biology of Reproduction vol. 44(5), pp. 806-813
	Garcia, M.A. et al., "Development of a Buffer System for Dialysis of Bovine Spermatozoa
	Before Freezing III.Effect of Different Inorganic and Organic Salts on Fresh and Frozen-
	Thawed Semen", 1989, Theriogenology, vol. 31(5),pp. 1039-1048
	Courtens, J. et al., Numerical simulation for freezing and thawing mammalian
	spermatozoa. Evaluation of cell injuries at different depths in bags or straws during all
	steps of the technique,
	Eiman, M.et al., Trehalose-enhanced fluidity of the goat sperm membrane and its
	protection during freezing, Biology of Reproduction 69: 1245-1250 (2003)
,	Foote, R.et al., Physiology and Management, Fertility of bull spermatozoa frozen in whole
	milk extender with trehalose, taurine, or blood serum, J. Dairy Sci. 76:1908-1913 (1993)
	Johnson, L. et al., Storage of bull semen, Animal Reproduction Science 62: 143-172 (2000)
	Johnson, L. et al., Erratum to "Storage of bull semen", Animal Reproduction Science 62: 143-172 (2000)
	McNutt, T.et al., Electrophoretic gel analysis of Hoechst 33342 stained and flow
	cytometrically sorted bovine sperm membrane proteins, Reprod. Dom Anim.31: 703-709 (1996)
	Van der Werf, Julius, An overview of animal breeding programs; Animal Breeding Use of
	New Technologies (This is a Post Graduate Foundation Publication)
	Best, T. P. et al. "Nuclear Localization of Pyrrole-Imidazole Ployamide-Flourescein Conjugates in Cell Culture", PNAS, 2003, Vol.100(21), pp. 12063 - 12068
	Gygi, M.P., et al. "Use of Fluorescent Sequence-Specific Polyamides to Discriminate
	Human Chromosomes by Microscopy and Flow Cytometry", Nuci Acids Res. 2002, vol.30(13),pp.2790 - 2799
	Young, L.et al., Prolonged feeding of low levels of zearalenone to young boars,
	BD Biosciences, BD AccuDrop Potion, www.bdbiosciences.com, 9/2002
	Agarwal, A.et al., Filtration of spermatozoa through L4 membrane:a new method, Fertility
	and Sterility, Vol. 06, No.6, 12/1991
	Anzar, M.et al., Optimizing and Quantifing fusion of liposomes to mammalian sperm using
	resonance energy transfer and flow cytometric methods, Cytometry49:22-27 (2002)
	Anzar, M.et al., Sperm Apoptosis in fresh and cryopreserved bull semen detected by flow
	cytometry and it's relationship with fertility, Biology of Reproduction 66: 354-360 (2002)
	Arav, A.et al., New trends in gamete's cryopreservation, Molecular and Cellular
	Endocrinology 187:77-81 (2002)

	Arndt-Jovin et al., "Analysis and Sorting of Living Cells According to Deoxyribonucleic Acid Content", Journal Histochem. And Cytochem., 1977, Vol 25(7), pp. 585-589
	Arts, E. et al., Evidence for the existence of lipid-diffusion barriers in the equatorial segment
<u> </u>	of human spermatozoa, Boichem J.384:211-218 (1994)
	Garner, D. et al., Spermatozoa and Seminal Plasma, Reproduction in farm animals 7th edition,
 	Gadella B,et al., Dynamics in the membrain organization of the mammalian sperm cell and
	functionality in fertilization, Vet Quart. 21:142-146 (1999)
	Garner, D.et al., Chromatin stability in sex-sorted sperm, VII International Congress of Andrology,
	Garner, D. et al., Morphological and ultrastrutural Characterization of mammalian
	spermatozoa processed for flow cytometric DNA analyses, Gamete Research 10:339-351 (1984)
	Garner, D., et al., Effect of hoechst 33342 staining and laser illumination on the viability of
	sex-sorted bovine sperm, Theriogenology, vol.57 No.1, 1-810 (2002)
	Garner, D. et al., Assessment of spermatozoal function using dual fluorescent staining and
	flow cytometric analyses, Biology of Reproduction 34:, 127-138 (1986)
	Gebhard D., Sorting Viabilityone more time,
	http://www.cyto.purdue.edu/hmarchiv/1998/2263.htm 2/14/04
	Givan, A., Flow Cytometry First Principles, (1992)
	Gledhill, B.et al., Identifying and separating X- and Y- Chromosome-bearing mammalian sperm by flow cytometry, Lawrence Livermore National Laboratory, 2/8/84
	Gledhill, B.et al., Identifing X- and Y- chromosome- bearing sperm by DNA
	content:Retrospective perspectives and prospective opinions'
	Gledhill, B.et al., Flow microflurometric analysis of sperm DNA contemt: Effect of cell shape on the fluorescence distribution, J. Cell Physiol.87: 367-378
	Gledhill, B.et al., Flow cytometry and sorting of sperm and male germ cells, Flow Cytometry and sorting, second edition, pp. 531-551 (1990)
	Gordon et al., " Genetic Transformation of Mouse Embryos by Microinjection of Purified DNA", Proc. Natil Acad. Sci., 1980, vol. 77 (12), pp.7380-7384
	Graham, J.et al., Analysis of sperm cell viability, Acrosomal integrity, and Mitocondrial function using flow cytometry, Biology of Reproduction 43: 55-64 (1990)
	Graham, J.et al., Effect of some Zwitter Ion buffers on freezing and storage of
ļ	spermatozoa I, Bull, J. Dairy Sci 55: 372-378 (1992)
	Grogan, W. et al., DNA Analysis and sorting of viable mouse testis cells, The Journal of Histochemistry and Cytochemistry, vol. 29 no.6 pp.738-746, (1981)
	Guthrie, et al., "Flow Cytometric Sperm Sorting: Effects of Varying laser Power on Embryo
	Development in Swine", Mol. Reprod. And Develop., 2002,vol. 61 (1), pp.87-92
	Hacker-Klom, U.B., et al., Effect of doxorubicin and 4'-epi-doxorubicin on
	mouse spermatogenesis. Mutation Research International Journal on Mutagenesis vol.
<u> </u>	159, pp 39-46. 1986. Hargrove, T. et al., Special Techniques, Part B Cryopreservation, Chapter 11B
<u> </u>	Hasler, J., Symposium: Reproductive Technology and Genetic improvementJ. Dairy Sci.
	75:2857-2879 (1992)
	Held, A.et al., Quasi- CW Solid- state lasers Expand their reach, Photonics Spectra, 12/2002
	Hinkley, R.et al., Rapid visual detection of sperm-egg fusion using the DNA-Specific Fluorochrome Hoechst 33342, Developmental Biology 118: 148-154 (1986)
	· · · · · · · · · · · · · · · · · ·

	Januskauskas, A.et al., Assessment of sperm quality through Fluorometry and sperm
	chromatin structure assay in relation to field fertility of frozen-thawed semen from Swedish
<u> </u>	Al bulls, Theriogenology 55: 947-961 (2001)
	Janendran, R.et al., Effect of glycerol and cryopreservation on oocyte penetration by
	human spermatozoa, PMID: 4025843, 7/6/06
	Johnson, L., A flow cytometric/ sorting method for sexing mammalian sperm validated by
	DNA analysis and live births, Cytometry, page 42 of supplement, 9/4/1990
	Johnson, L., Flow sorting of intact X & Y chromosome-bearingmammalian spermatozoa,
	The Journal of the Society for Analytical Cytology Cytometry, (1988)
	Zhang,M. et al., Development of bovine embryos after in vitro fertilzation of oocytes with a
	flow cytometrically sorted, stained and unsorted sperm from different bulls,
	Theriogenology 60: 1657-1663 (2003)
	Jones,R.et al., Effect of Osmolality and Phosphate, "Tris", "Tes", "Mes", nd "Herpes"
	Hydrogen ion buffers on the motility of bull spermatozoa stored at 37 or 5∘C, Ausi J. Biol.
	Sci.25:1047-1055 (1972)
	Jones,R., Plasma membrane structures and remodelling during sperm maturation in the
	epididymis, Journal of Reproduction and Fertility (1998)
1	Gerrits, Roger J. Application of Biotechnology to Animal Production US Dept. of
	Agriculture, Beltsville Maryland.
	Johnson, L., Separation of X and Y Chromosome-bearing mammalian sperm by DNA
	content cytometric analysis and sorting, US Department of Agriculture,
	Johnson, M., The Macromolecular Organization of membranes and its bearing on events
	leading up to Fertilization, Journal of Reproduction and Fertility (1975)
	Johnson, L., Verified Sex Pre-Selection in Farm Animals,
	Johnson, L., Prograss towards achieving sex preselection in farm animals, USDA
	Agricultural Research Service, (1989)
	Keeler, K.et al., Flow microfluorometric analysis of living spermatozoa stained with
	Hoechst 33342, J. Reprod.Fert. 68:205-212 (1983)
	Keij, J.et al., High speed Photodamage cell sorting: An evaluation of the Zapper Prototype
	Methods in cell Biology Vol. 42, (1994)
	Kirchhoff, C.et al., The Molecular biology of the sperm surface:Post-Testicular Membrane
	Remodelling, The Fate of the Male Germ Cell, (1997)
	Krueger, C.et al.,Low dose Insemination in synchronized gilts, Theriogenology 52: 1363-
	1373 (1999)
	Lahdetie, J., Induction and survival of micronuclei in rat spermatids. Comparison of two
	meiotic micronucleus techniques using cyclophosphamide, Mutation Research, 203:47-53
	(1988)
<u> </u>	Laser Innovations - Applications, http://www.laserinnovations.com/488nm.htm 2/2/04
	Libbus, B.et al., Incidence of chromosome aberrations in mammalian sperm stained with
	Hoechst 33342 and UV-laser irradiated during flow sorting, Mutation Research, 182: 265 -
<u> </u>	274 (1987)
	Loken, M., Separation of viable T and B lymphocytes using a cytochemical stain, Hoechst
	33342, The Journal of Histochemistry and Cytochemistry,vol.28, no.1, pp.36-39 (1980)
	Lucas, J.et al., Orientation measurments of microsphere doublets and metaphase
	chromosomes in flow, Cytometry 7:575-581 (1986)
	Luttmer, S.et al., Examination of living and fixed gametes and early embryos stained with
	supravital fluorochromes (Hoechst 33342 and 3,3'-dihexyloxacarocyanine lodide), Gamete
ll .	Research 15:267-283 (1986)
<u> </u>	Masaki, J.et al., Effect of bull seminal plasma on the membrane characteristics of
	boarepididymal spermatozoa,
<u> </u>	podropidalymai opermatozoa,

	Maxwell, W.et al., Physiology of spermatozoa at high dilution rates: The influence of seminal plasma, Theriogenology 52: 1353-1362 (1999)
	Mazur, P., The role of Intracellular freezing in the death of cells cooled at supraoptimal rates, Cryobiology 14:251-272 (1977)
	McSweeney, K. et al., Abstract: Insemination of lactating holstein cows with sexed
	frozen/thawed sperm, http://www.cvmbs.colostate.edu/physio/abstract/ges12.html 3/16/04
	Medeiros,C. et al., Current status of sperm cryopreservation: Why isn't it better? Theriogenology 57: 327-344 (2002)
	Meistrich, M., Potential and limitations of physical methods for separation of sperm
	bearing an X- or Y- chromosome,
	Meistrich, M.et al., "Cytogenetic" studies of spermatids of mice carrying Cattanach's translocation by flow cytometry, Chromosoma 74:141-151 (1979)
	Morrell, J. et al., Offspring from inseminations with mammalian sperm stained with
	Hoechst 33342, either with or without flow cytometry, Mutation Research 224:177-183 (1989)
	Morrell et al.,"Sexing of Sperm by Flow Cytometry", The Veterinary Record, 1988, pp.322-324.
	Morrier, A.et al., Glycerol addition and conservation of fresh and crypreserved ram
	spermatozoa, Canadian Journal of AnimalScience, 9/2002http://pubs.nrc-cnrc.gc.ca/aic-journals/2002ab/cjas02/sep02/cjas01-045.html
	Moruzzi, J., Selecting a mammalian species for the separation of X- and Y- chromosome-
	bearing spermatozoa, J. Reprod. Fert. 57:319-323 (1979)
	Murthi S. et al., Improved data acquisition system for digital flow cytometry, (2002)
	Studt, T., MEMS-based Cell Sorter Speeds Clinical Studies, R& D Magazine, Dec.2003:
	pp.36-37 as currently presented on and printed from http;//www.rdmag.com 2 pgs.
	Gwo-Bin, L.et al., Multi-cell-line micro flow cytometers with buried SU-8/SOG Optical waveguides, 2/2002
	Shapiro, H. M. et al., Multistation Multparameter Flow Cytometry: Some Influences of Instrumental Factors on System Performance, 1983,pp. 11-19,4,Allan R. Liss, Inc.
	OcanaQuero, J.et al., Biological effects of helium-neon irradiation on acrosome reaction in bull, Scisearch Journal of Photochemistry and Photobiology, Vol. 40 No. 3, pp. 294-298 (1997)
	Pangawkar, G. et al., Physical and biochemical characteristics of semen in relation to fertility of Holstein-Friesian bulls, Indian vet. Med.J. vol.13: 21-26 (1989)
	Papa, S. et al., Chromatin organization in Isolated nuclei: Flow cytometric characterization
	employing forward and perpendicular light scatter, Cell Biochemistry and Function Vol. 6: 31-38 (1988)
	Parks, J. et al., Lipids of plasma membrane and outer acrosomal membrane from bovine
 	spermatozoa, Biology of Reproduction 37:1249 -1258 (1987) Parks, J. Processing and handling bull semen for artificial insemination - Don't add insult
	to injury!, Department of Animal Science Cornell University
	Partec, Taking flow cytometry to the next generation, Catalogue 2001 - 2002
	Perez-Pe, R.et al., Semen plasma proteins prevent cold shock membrane damage to ram
	spermatozoa, Theriogenology 56 (3): 425-434, 8/1/2001, PMID: 11516122
J	http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?CMD=search&DB=pubmed
	Peter, A. et al., Fractionation of bovine spermatozoa for sex selection: A rapid immunomagnetic technique to remove spermatozoa that contain the H-Y antigen,
	Theriogenology 40:1177- 1185 (1993)
ш	[1116110gc11010gy +0.1177-1100 (1880)

	Petersen, Timothy W., et al, Stability of the Breakoff Point in a High-Speed Cell Sorter
;	The Journal of the international society for Analytical Cytology, Vol.56A Num.2, 12/2003
	Pinkel Dan, Flow Cytometry and Sorting Analytical Chemistry,
	3/1982 vol. 54 No.3
	Pinkel Dan, Cytometric Analysis of Mammalian Sperm for Induced Morphologic and DNA
	Content Errors; Biological Dosimetry (Cytometric Approaches to Mammalian Systems)
	1984.
	Pinkel, D. et al; Radiation-Induced DNA Content Variability in Mouse Sperm. Radiation Research An International Journal, Vol.95, Num.3, 9/1983
	Piumi, F. et al., Specific cytogenetic labeling of bovine spermatozoa bearing X or Y
	chromosomes using florescent in situ hybridization (FISH), Genet, Sel. Vol. 33: 89-98 (2001)
	Polge, C., Low-temperature storage of mammalian spermatozoa, Unit of Reproductive
	Physiology and Biochemistry, Cambridge
	Edited by Bell-Prince, C., NFCR Newsletter, http://www.ls.lanl.gov/NFCR/newsletter- Oc98/oct98.html 1/6/04
	Rasul, Z.et al., Changes in motion characteristics, plasma membrane integrity, and
	acrosome morphology during cryopreservation of buffalo spermatozoa, Journal of Andrology, Vol.22 Num.2, 3-4/2001
	Rees, William A., et al, Betaine Can Eliminate the Base Pair Composition Dependence of
	DNA Melting; Biochemistry 1993, 32, pgs. 137-144.
	Rens, W.et al., An X-Y paint set and sperm FISH protocol that can be used for validation
	of cattle sperm separation procedures, Journals of Reproduction and Fertility, 121: 541-546 (2001)
	Reyes-Mereno, C.et al., Characterization of Secretory Proteins from cultured Cauda
	Epididymal Cells that significantly sustain bovine sperm motility, Molecular Reproduction and Development 63: 500-509 (2002)
	Rippel, N. et al., Transcervical insemination: Effects of variation in total sperm number/dose on fertility, 83rd Annual Fall Conference for Veterinarians, 10/2002
	Rizzo, W. et al., Liposome-mediated transfer of simian virus 40 DNA and minichromosome into mammalian cells, J. Gen. Virol 64:911-919 (1983)
	Ruch, F., Determination of DNA content by microfluorometry, Introduction to Quanitative Cytochemistry, pp.281-294 (1966)
	Saacke, R.et al., Semen Quality test and their relationship to fertility, 4th National Association of Animal Breeders, (1972)
	Salisbury, G.W., et al. "Preservation of Bovine Spermatozoa in Yolk-Citrate Diluent and Field Results from its Use", Journal of Dairy Science, 1941, vol.24(11),pp.905-910
	Schroter, S.et al., The glycocalyx of the sperm surface, Human Reproduction Update:
	Vol.5, Num.4, pp.302-313 (1999)
	Schuster, T. et al., Isolation of motile spermatozoa from semen samples using
	microfluidics, Reproductive BioMedicine Online, Vol. 7 Num. 1 75-
<u> </u>	81,www.rbmonline.com/Article/847, 4/16/03 Seidel, George E. Jr. "What about sexed semen?" Hoard's Dairyman, The
	National Dairy Farm Magazine, 5/10/01
 	Sexing Technologies, Welcome to sexing Technologies,
	http://www.sexingtechnologies.com/ 12/11/03
	Shapiro, Howard M. M.D., Building Flow Cytometers Chapter 9. Practical Flow Cytometry,
	second edition, Property of Washington University Medical Library.
	Sharpe, J. et al., Radially symmetric excitation and collection optics for flow cytometric sorting of aspherical cells, Cytometry, 29:363-370 (1997)

Shapiro, H., Re: cheap laser idea??, http://www.cyto.purdue.edu/hmarchiv/1998/1015.htm 2/3/04
 Smith, P.et al., Characteristics of a Novel Deep Red/ Infrared Fluorescent Cell-Permeant DNA Probe, DRAQ5, in Intact human Cells Analyzed by Flow Cytometry, Confocal and Multiphoton Microscopy, Cytometry 40:280-291 (2000)
Stanger, J.et al., The Relationship between motility and the FITC-BSA binding Properties of Mouse epididymal spermatozoa, The Journal of Experimental Zoology 227: 323- 327 (1983)
Stanic,P. et al.,Comparison of protective media and freezing techniques for cryopreservation of human semen, http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?CMD=search&DB=pubmed, 7/11/2000
 Stewart,R., Georgia Beef Challenge, Livestock Newsletter 1-2/2002
Takacs, T.et al., Flow Cytometric determination of the sperm cell number in diluted bull semen samples by DNA staining method, Acta Biochim. Biophys. Hung. Vol. 22 Num. 1, pp. 45-57 (1987)
Thurston,L. et al., Identification of Amplified restriction fragment length polymorphism markers linked to genes controlling boar sperm viability following cryopreservation, Biology Of Reproduction 66: 545-554 (2002)
Tone, S.et al., A method of vital staining of mouse eggs using Hoechst dye, Department of Developmential Biology (1986)
Tubman,L.et al., Abstract:Normality of calves resulting from sexed sperm, http://www.cvmbs.colostate.edu/bms/abstract/ges12.html 3/16/04
Tucker,K.et al., Sperm separation techniques:Comparison of gradient products, Proceedings 2ed International workshop for Embryologists: Troubleshooting activities in the ART lab. (2002)
Van Dilla, M.et al., Measurement of Mammalian Sperm Deoxyribonucleic acid by Flow Cytometry, The journal of Histochemistry and Cytochemistry Vol.25 Num.7 pp.763-773 (1977)
Vazquez, J.et al., Nonsurgical Uterotubal Insemination in the Mare, Reproduction: Mare Vol.44 (1998)
Vishwanath,R.et al., Storage of bovine semen in liquid and frozen state, Animal Reproduction Science 62: 23 - 53 (2000)
Washburn, S., Sex-Sorted Semen; Still several steps short of sensational, http://www.cals.ncsu.edu/an sci/extention/animal/news/april96/april1965.html 3/16/04
Welch,G.et al., Sex preselection: Laboratory Validation of the sperm sex ratio of Flow sorted X- and Y- sperm by sort reanal ysis for DNA, Theriogenology 52:1343-1352 (1999)
Welch, G.et al., Fluidic and optical modification to a facs IV for flow sorting of X&Y Chromosomes bearing sperm based on DNA, International Society for Analytical Cytology (1994)
Wiltshire, M.et al., A Novel Deep Red/ Low infrared fluorescent flow cytometric probe DRAQ5NO, For the Discrimination of intact nucleated cells in apoptotic cell populations, Cytometry 39: 217-223 (2000)
Woelders, H. et al., Effects of Trehalose and Sucrose, Osmolality oh the freezing medium, and cooling Rate on Viability and intactness of bull sperm after freezing and thawing, Cryobiology 35: 93-105 (1997)
Wolf, D., Lipid domains in sperm plasma membranes, Molecular Membrane Biology 12: 101-104 (1995)

.

	Wolf, D.et al., Changes in sperm plasma membrane lipid diffusibility after hyperactivation during In vitro capacitation in the mouse, The Journal of Cell Biology, Vol.102: 1372-1377(1986)
_	Wolf, D.et al., Diffusion and regionalization in membranes of maturing ram
	spermatozoa, The Journal of Cell Biology, Vol.98:1678-1684 (1984)
	XY Files, Issue 1 6/1999
	X Y, Inc., Sex selection Procedure, http://www.xyinc.com/sex select.html, 2/21/03
	XY Files, Issue 4 8/2000
	XY Files, Issue 2 10/1999
	XY Files, Issue 3 3/2000
	XY Files, Issue 5 3/2001
	XY Files, Issue 6 3/2002
	Lindsey, A. C., et al., Hysteroscopic inseminatin of mares with low numbers of nonsorted or flow sorted spermatozoa; Equine vet. J. (2002) 34(2) 128-132
	Sharpe, Johnathan, Advances in flow cytometry for sperm sexing, Unpublished paper, 2008
	Johnson, S.K., Possibilities with today's reproductive technologies. Available online at www.sciencedirect.com; Therio 64(2005) pgs.639-656
	Brogliatti, G. et al., Pregnancy Rates and First Born Calves by Artificial Insemination using Sexed Semen in Argentina: Therio. January 2, 2002, Vol.57, No.1 . Pg 369
	Palma, G. et al., Sperm Physiology: The Ability to Produce Embryos In Vitro
	using Semen from Bulls with a Low Non-Return Rate. Therio. Pg. 308
	Gottlinger, Christopher et al., Cell-Cooling in Flow Cytometry by Peltier
	Elements. Cytometry 7:295-297 (1986)
	ABSTRACTS: American Dairy Science Assoc., American Society of Animal
	Science, June 22-26, 2003 Phoenix AZ. J.Anim Sci. Vol.81 Suppl.1/J. Dairy Sci.
	Vol. 86, Suppl. 1
	Garner, Duane L., et al, Effect of Semen Dilution on Bovine Sperm Viability as
	Determined by Dual-DNA Staining and Flow Cytometry. J. of Andrology, Vol.
	18, No. 3 May/june 1997.
	Lindsey, A. L., et al., Hysteroscopic or rectally guided, deep-uterine insemination of mares with spermatozoa stored 18 h at either 5 °C or 15 °C prior to flow-cytometric sorting, Animal Reproduction Science, Volume 85, Issues 1-2, January 2005, Pages 125-130